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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/987,968	11/16/2001	Glenn Nelson	12321	7875

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EXAMINER
SMITH, JOHNNIE L

ART UNIT	PAPER NUMBER
2881	

DATE MAILED: 05/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/987,968	NELSON, GLENN	
	Examiner	Art Unit	
	Johnnie L Smith II	2881	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 November 2001* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-29* is/are rejected.

7)☒ Claim(s) *21* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *16 November 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Specification

1. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

2. The attempt to incorporate subject matter into this application by reference to US Patent Application entitled " Article Irradiation System With Multiple Beam Paths" filed November 16 2001 is improper because there is no listed US patent applicant number. The incorporation must be updated with the assign reference number.

Claim Objections

3. Claim 21 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 21 erroneously depends upon claim 198. Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 2, 5-8, 11-18 and 24-29 are rejected under 35 U.S.C. 102(b) as being anticipated by US patent 6,051,185 (Beers) April 2000. In reference to claims 1 and 2, Beers discloses an irradiation system comprising: a radiation source arranged to emit a radiation beam along at least one beam path extending from the radiation source; an inner shield disposed around the radiation source; a first conveyor system for transporting articles through the beam path; and an outer shield (column 6 lines 34-59). The irradiation system is arranged into an upper level and a lower level, the first conveyor system and the radiation source being located on the upper level. The irradiation system comprising a second conveyor system located on the lower level (column 6 lines 53-55).

6. In reference to claims 5-8, and 11-18, Beers also discloses the irradiation system wherein the outer shield forms a first chamber and a second chamber, the inner shield comprises a removable inner module and a removable outer module

for allowing access to the radiation source, the removable inner module and the removable outer module being sized so that the radiation source can pass through openings left in the inner and outer shields when the removable inner and outer modules are removed (column 4 line 9-column 5 line 4).

7. In reference to claims 8, 11, and 12, Beers shows the irradiation system comprising a wall in the second chamber extending substantially parallel to the dividing wall (see figure 4). Beers discloses an irradiation system wherein the outer shield comprising two side walls; a first end wall extending substantially perpendicularly to and connected to the side walls; and a second end wall connected to the side walls, wherein the dividing wall is substantially parallel to the second end wall (see figures 2A, 2C, and 4). Beers also discloses the irradiation system comprising at least one port in the removable outer module for allowing ballast material to pass out of the removable outer module, a ceiling over the upper level comprising a volume of ballast material, a portion of the ballast material covering the outer shield, and a ceiling extending over the irradiation system and having at least one removable ceiling plug for allowing access to the radiation source. The removable ceiling plug allows for removal of a subassembly of the radiation source from the irradiation system (column 2 lines 39-58, column 4 line 29-column 6 line 26).

8. In reference to claims 24-29, Beers teaches a method of removing a radiation source from an irradiation system comprising a radiation source arranged to emit a radiation beam along a beam path, an inner shield disposed around the radiation source, an outer shield disposed around the inner shield. The method further comprising the steps of; disconnecting a removable module of the outer shield from the outer shield; disconnecting a removable module of the inner shield from the inner shield; and removing the radiation source from the irradiation system through openings left by the removable modules. The step of disconnecting a removable module of the outer shield comprises: disconnecting an outer plate of the removable module of the outer shield from adjacent portions of the outer shield; and disconnecting an inner plate of the removable module of the inner shield from adjacent portions of the outer shield. The method further teaches the step removing ballast material from the removable module of the outer shield, by opening a port in a bottom portion of the removable module of the outer shield; and allowing the ballast material to pass through the port, unbolting the removable module of the outer shield from the adjacent portions, disconnecting an outer plate of the removable module of the inner shield from adjacent portions of the inner shield, and disconnecting an inner plate of the removable module of the inner

shield from the adjacent portions of the inner shield (column 2 lines 39-58, column 4 line 29-column 6 line 26.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. Claims 3, 4, 9, 10, and 19-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over US patent 6,051,185 (Beers) April 2000 in view of US 6,529,577 (Allen et al). As discussed above, Beer disclosed all elements of the

claims. In reference to claims 3 and 4, Beer fails to clearly disclose the irradiation system wherein the upper and lower level are separated by a support surface, the at least one beam path including a vertically extending beam path extending through a path aperture in the support surface for irradiating articles conveyed by the second conveyor, or the irradiation system wherein the first conveyor system comprises a process loop disposed around the inner shield. Allen et al teaches such features and discloses a first support structure that disposes articles relative to a radiation beam, the articles passing from the beam through the articles on the first structure. A second support structure disposes articles relative to the beam and to the articles on the first structure to obtain an irradiation of the articles by radiation passing from the accelerator through the articles on the first structure. A mechanism transfers the articles on the first structure to the second structure, after the irradiation of the articles on the first structure, to obtain the irradiation of the articles on the second structure. Each of the first and second structures may provide for an irradiation of the articles initially through first sides of the articles and subsequently through second sides of the articles opposite to the first sides (column 2 lines 25-63. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Beers with the teaching

of Allen et al for the purpose of having irradiation on two levels and processing conveyor sections as taught in Beers (see fig. 4).

12. In reference to claims 9 and 10, as discussed above for claim 4, Beers fails to clearly teach a processing loop, but as discussed above such features are inherent in similar systems. Beer does disclose the irradiation system wherein an entry conveyor system having a first end and a second end arranged to convey articles to the processing conveyor section, and an exit conveyor system having a first end and a second end, the first end being arranged to convey articles from the processing conveyor section, wherein the entry conveyor and the exit conveyor extend through an opening in the dividing wall, and wherein the exit conveyor system and the entry conveyor system extend through an opening in the outer shield (see figures 4, column 6 lines 28-49).

13. In reference to claims 19-23, Beers fails to disclose an irradiation system, wherein the third beam path extends generally vertically from the upper level to the lower level, wherein the upper and lower level are separated by a support surface, the third beam path extending through a path aperture in the support surface, wherein the third beam path intersects the second conveyor system at a location below an area surrounded by the upper level shield, wherein the lower level includes a first chamber and a second chamber, the location where the third beam

path and the second conveyor system intersect being located in the first chamber, and the first chamber being at least substantially covered by the upper level shield, wherein the radiation source is arranged to emit a radiation beam along a second beam path for irradiating articles on the upper level. Allen et al teaches such features and discloses a first support structure that disposes articles relative to a radiation beam, the articles passing from the beam through the articles on the first structure. A second support structure disposes articles relative to the beam and to the articles on the first structure to obtain an irradiation of the articles by radiation passing from the accelerator through the articles on the first structure. A mechanism transfers the articles on the first structure to the second structure, after the irradiation of the articles on the first structure, to obtain the irradiation of the articles on the second structure. Each of the first and second structures may provide for an irradiation of the articles initially through first sides of the articles and subsequently through second sides of the articles opposite to the first sides (column 2 lines 25-63). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Beers with the teaching of Allen et al for the purpose of having a three-beam system as taught in Beers (column 6 lines 34-59).

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US patents 6, 215,847 (Perrins et al) April 2001, 6,459,089 (Masefield et al) October 2002, 6,294,791 (Williams et al) September 2001, 6,463,123 (Korenev) October 2002, 6,191,424 (Stirling et al) February 2001, 5,810,707 (Montebello et al) September 1998, 5,994,706 (Allen et al) November 1999, and 6,529,577 (Allen et al) March 2003. All of the cited US patents contain art similar to that being claimed by applicant, more specifically, systems for irradiating articled by conveyor means.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Johnnie L Smith II whose telephone number is 703-305-0380. The examiner can normally be reached on Monday-Thursday 7-4 P.M. and Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R Lee can be reached on 703-308-4116. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

JLSII
April 28, 2003

JOHN R. LEE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800